March, 1954

THE CHEMIST

VOLUME XXXI NUMBER 3

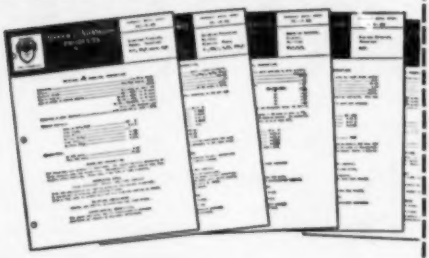
—Bachrach

DR. HUGH W. FIELD

Receives Pennsylvania AIC Chapter Honor Scroll

(See page 93)

For Production and Research Men...



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☐ Aluminum Fluoride, Powder, Technical	DA-32521
☐ Aluminum Nitrate, Crystal, Technical	DA-32341
☐ Aluminum Sulfate, Hexahydrate, Technical	DA-48871
☐ Ammonium Acetate, Crystal, Purified	DA-32711
☐ Ammonium Fluoborate, Crystal, Technical	DA-32731
☐ Ammonium Fluoride, Crystal, Technical	DA-32671
☐ Ammonium Oxalate	DA-33251
☐ Ammonium Sulfate, Purified	DA-33151
☐ Ammonium Thiosulfate, Solution, Technical	DA-85271
☐ Barium Fluoride, Technical	DA-34181
☐ Calcium Acetate, Powder, Purified	DA-34991
☐ Calcium Chloride, Anhydrous, Purified	DA-49211
☐ Calcium Chloride, USP	DA-35011
☐ Calcium Fluoride, Powder, Reagent	DA-35201
☐ Calcium Phosphide, Technical	DA-35341
☐ Chromium Fluoride, Technical	DA-35771
☐ Chromium Potassium Fluoride, Purified	DA-35791
☐ Chromium Potassium Sulfate, Granular, Photo	DA-35841
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☐ Cuprous Chloride, Technical	DA-36571
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☐ Magnesium Fluoride, Purified	DA-39121
☐ Oxamide, Purified	DA-48651
☐ Potassium Acetate, N. F., & Crystal, Technical	DA-40821
☐ Potassium Bifluoride, Technical	DA-41461
☐ Potassium Borate, Tetra, Purified	DA-40771
☐ Potassium Cyanate, Powder, Purified	DA-41591
☐ Potassium Cyanate, Powder, Technical	DA-48821
☐ Potassium Fluoborate, Crystal, Technical	DA-41361
☐ Potassium Fluoride, Anhydrous, Purified	DA-40911
☐ Potassium Fluoride, Crystal, Purified	DA-41041
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The Responsibility of the Chemist to His Country, Dr. Emil Ott, F.A.I.C.
Advice on the Submission of Inventions and Ideas to Large Corporations (a reprint), Marvin Small.
What Is a Fellow? Dr. Ernest H. S. Van Someren, F. Inst. P.
The Promising Field of Fluorochemicals, R. M. Adams
Award of Honorary AIC Membership to Francis J. Curtis, F.A.I.C.

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TO COME

In the April issue of THE CHEMIST, Dr. Emil Ott will tell us about "The Responsibility of the Chemist to His Country." This is one of those splendid papers presented at the Symposium on Public Relations. Dr. Ott treats his subject a bit differently than you would suspect from the title. The presentation of Honorary AIC Membership to Francis J. Curtis, F.A.I.C., will be featured. A more complete Program of the 1954 Annual Meeting and other articles and news of current interest will make the April issue worth reading for personal profit.

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PREVIEW OF ANNUAL MEETING PROGRAM

The American Institute of Chemists

May 12, 13, 14, 1954

BERKELEY-CARTERET HOTEL • ASBURY PARK, N. J.

Wednesday, May 12th

JERSEY DAY

9:00 A.M. Registration:

Advance Registration (Received by Chester A. Amick, chairman, Committee on Registration, at Bound Brook, N. J., on or before May fifth.)

AIC Members	$3.00
Non-Members	5.00
Students	1.00

Registration at Door

AIC Members	$5.00
Non-Members	6.00
Students	1.00

(There is no registration fee for wives of members attending the meeting. Registration forms and hotel reservation cards will be sent to all AIC members thirty days before the Annual Meeting. Others may request advance registration forms from The American Institute of Chemists, 60 E. 42nd St., New York 17, N. Y.)

Coffee Hour (no charge) for Wednesday registrants.

Morning and afternoon: Golf (Registration $1.00 does not include greens fees or caddies. Please Register in advance.) Prizes.

1:00 P.M. Special tours leaving hotel (Tickets $1.50).

Tour A: Trip to Lenox, Inc., world-renowned makers of china.

Tour B: Trip to Naval Air Station, Lakehurst, N. J. (Names of those taking this trip must be received by May first.)

5:00 P.M. AIC President Work's Reception to the National Council.

6:15 P.M. Dinner Meeting, AIC National Council and Board of Directors.

8:00 to 9:00 P.M. Color films. (No charge.)
"New Jersey Journeys" and other travelogues.

Thursday, May 13th

8:00 to 9:30 A.M. Registration (continued).
Coffee Hour (no charge) for Thursday Registrants.

10:00 A.M. Annual Business Meeting of The American Institute of Chemists. Announcement of the election of new officers and councilors. Vote on revision of Constitution. Other Business.

12:15 P.M. Informal Luncheon (tickets $3.50) speaker: Dr. August Merz, "The Historical Background of Chemical Industry in New Jersey."

2:00 P.M. Panel Session, "Legal Aspects of a Chemist's Life." Chairman: Dr. George L. Royer, Chairman of the Committee on Employer-Employee Relations; Administrative Assistant to General Manager, Research Division, American Cyanamid Co., Bound Brook, N. J.

"Report of the Sub-Committee of the Employer-Employee Relations Committee on Contracts," Dr. Lloyd A. Hall, Technical Director, Griffith Laboratories, Inc., 1415-31 W. 37th St., Chicago 9, Ill.

"Contracts From a General Point of View," Richard H. Gregory, Jr., Counsellor-at-Law, Union Carbide and Carbon Corp., 30 E. 42nd St., New York 17, N. Y.

"Patents From a Legal Point of View," John T. Kelton, Patent Attorney, Watson, Leavenworth, Kelton and Taggart, 100 Park Ave., New York 17, N. Y.

Assistant Secretary and General Counsel, Thomas J. Lipton, Inc., Hoboken, N. J.

2:00 P.M. For the Ladies:

Bridge. (No charge, but please indicate in advance if you will play.) Prizes.

Celanese Fashion Show. (No charge.)

5:30 P.M. Cocktails. (No charge.)

6:30 P.M. Informal Buffet Dinner. (Tickets $3.50.)

Until 9:00 P.M. Beer and Lemonade Abend. (No charge.)

Program: Professional Quiz for Chemists and Their Wives. Introduction: Dr. Max Bender, American Cyanamid Co., Bound Brook, N. J. Quizmaster, Savery F. Coneybear, Associate Research Director, Colgate-Palmolive Co., Jersey City 2, N. J.

(Lively questions about professional subjects submitted by AIC members will be answered or discussed both by experts and by those of the audience who wish to contribute. See page 88 for more about the questions.)

Friday, May 14th

8:00 A.M. National Council Breakfast.

9:00 A.M. Registration—continued.

Coffee Hour. (No charge) for Friday registrants.

10:00 A.M. Panel Discussion, "Education for the Chemical Profession." Moderator: Dr. Harvey A. Neville, Chairman Committee on Education; Dean, Graduate School, Department of Chemistry, Lehigh University, Bethlehem, Pa.

"Undergraduate Training," Dr. Hubert N. Alyea, Professor of Chemistry, Princeton, N. J.

"Graduate Training," Dr. Henry B. Hass, President, Sugar Research Foundation, Inc., New York, N.Y.

"Continuing In-Service Study," Dr. Thomas H. Vaughn, Vice President, Research and Development, Colgate-Palmolive Company, Jersey City, New Jersey.

"On the Part of Chemical Industry," Dr. Per K. Frolich, Vice President for Scientific Activities, Merck & Co., Inc., Rahway, N. J.

12:15 P.M. Honor Recipients' Luncheon. (Tickets $4.00.) An Opportunity to meet Gold Medal Recipients, Honorary Membership Recipients, and the current Recipients of the Chapter Awards.

Toastmaster: Dr. Randolph T. Major, Vice President, Merck & Company, Inc.

Announcement of Honorary Membership Awards for the coming year, Dr. Sidney D. Kirkpatrick, Chairman, Committee on Honorary Membership.

Presentation of Honorary AIC Membership to Dr. William J. Sparks, 1954 AIC Gold Medalist.

2:00 P.M. General Session.

Chairman, Dr. Lincoln T. Work, Retiring AIC President.

"Security Versus the Challenge of a Vital Life," Dr. Work.

"Engineering Manpower." Speaker to be announced.

"Psychological and Emotional Problems of Technical and Executive Personnel." Dr. Lydia Giberson, Personnel Advisor to Employees, Metropolitan Life Insurance Company.

"Consultative Management," Arthur Slade, of Rogers, Slade & Hill, 342 Madison Ave., New York 17, N. Y.

"Some Phases of Education," Dr. Lewis Webster Jones, President Rutgers University, New Brunswick, N. J.

6:00 P.M. Reception to Medalist. Courtesy of Standard Oil Development Company.

7:30 P.M. Gold Medal Dinner. (Tickets $10.00. Choose, in advance, filet mignon or lobster.)
Toastmaster: Dr. Lincoln T. Work, Retiring AIC President.
Speakers for the Medalist:
Dr. Carl S. Marvel, Professor of Organic Chemistry, University of Illinois, Urbana, Illinois.
Dr. E. V. Murphree, President, Standard Oil Development Company.
Presentation of the Gold Medal: Dr. Gustav Egloff, Past President, The American Institute of Chemists; Chairman, Jury of Medal Award.
Acceptance: Dr. William Joseph Sparks, Director, Chemical Division, Standard Oil Development Co., Linden, N. J.; Chairman of the Division of Chemistry & Chemical Technology, National Research Council.

The Professional Forum

THE EVENING of May 13th, on the Annual Meeting program, is reserved for chemists, their wives and friends, to meet at a Buffet Dinner, and to participate in a "Professional Quiz," with Savery F. Coneybear of Colgate-Palmolive Company acting as Quizmaster. Refreshments will be served during the evening.

Here chemists may present professional questions or discuss them in an informal, lively forum. Dr. Max Bender, chairman of the Program Committee, will be glad to receive questions in advance, to start the discussions, if members would like to contribute in this way. Questions should be on professional, not technical subjects. Sample questions already suggested are: "Why Be a Chemist?" "How Do I Make Management Aware of Me?" "Would I Encourage My Children to be Chemists?" Those who are unable to attend the Annual Meeting this year, may send in questions for this quiz or comments on professional subjects, and thus participate in the forum with their colleagues. But come if you possibly can!

A List of Committees for the 1954 AIC Annual Meeting appears on page 120.

Appointed: Kenneth H. Klipstein, F.A.I.C., to head the new research division of American Cyanamide Company, as general manager.

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Specific Gravity 25°/15°C	1.100	
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EDITORIAL

Unique Among Meetings

THE 1954 Annual Meeting of THE AMERICAN INSTITUTE OF CHEMISTS is unique among scientific meetings because it is dedicated wholly to the chemist and his profession. No technical sessions appear on its program, not even a survey of technical fields. THE AMERICAN INSTITUTE OF CHEMISTS is interested in people, as Dr. Lincoln T. Work, its president, has often reminded us, and this program is designed to emphasize just that.

The New Jersey AIC Chapter is the enthusiastic host for this Springtime meeting to be at the Berkeley-Carteret Hotel (on the ocean shore) Asbury Park, N. J., May 12th to 14th.

Dr. J. B. Allison, of Rutgers University, chairman of the New Jersey Chapter, points out that "chemists are deeply interested in their profession, but every other meeting I have ever attended has had something to do with the knowledge or practice of chemistry. This meeting is a chance for all of us to really do something about our profession. Moreover, this is likewise a chance for companies and industries to consider the important problems that arise in relation to the association of their technical men with the organization.

Industries are built around the chemist and his productivity, and whatever improves the relationship between industry and the technical man makes it possible for him to produce more adequately.

"On the first day, 'Jersey Day,' we can all get together in good fellowship and know each other personally as people. There is golf for as much of the day as we wish, interesting trips in the afternoon, and color travelogues on New Jersey and other places in the evening. During the next two days, we can get to know ourselves as chemists and learn about our profession. Outstanding authorities will enlighten us, but the evening of May 13th is reserved for us as individuals to express our own thoughts in an open forum."

A preview of the Annual Meeting program, promising fun, fellowship, and professional orientation, will be found on preceding pages.

Honored: Dr. Howard L. Gerhart, F.A.I.C., director of research for Pittsburgh Plate Glass Company, Paint Division, Milwaukee, Wis., who was awarded an honorary doctor of science degree by Franklin and Marshall College, "for outstanding leadership and administrative ability in the field of industrial research."

Appointed: To the permanent Advisory Panel on Minerals Research of the National Science Foundation, Dr. Clyde E. Williams, F.A.I.C., of Battelle Memorial Institute, Columbus, Ohio.

New Research Building of Wyandotte Chemicals Corporation, Wyandotte, Michigan.

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The Importance of Communication

A Report of the Acceptance Speech of Dr. H. W. Field

(Dr. Field, vice president, Atlantic Refining Company, 2700 Passyunk Ave., Philadelphia, Pa., received the Honor Scroll of the Pennsylvania AIC Chapter at its December 3, 1953, meeting.)

IN RECEIVING the award, Dr. Field said he was greatly honored by the presentation but truly felt that in accepting it he was accepting not for himself alone but also for a great number of his immediate associates who have worked many years with him as members of a research team. He pointed out that as time goes on individual honors connected with industrial research are becoming less and less appropriate.

The event, however, did give him an opportunity to briefly review, speaking as one scientist to a group of scientists, a subject which he considers to be of paramount importance to all scientists. This subject is *Communications* and the importance of good communications to the scientists, to the business man who is the scientist's boss, and to the community at large.

He recalled a recent talk given by the famous lecturer, Arthur Secor, to a foreman's dinner meeting of his company, on the importance of communications between the foreman and workers. In his lecture four main points were considered important. First, use words the listener really understands. Second, use examples or analogies. Third, keep the listener psychologically receptive, and fourth, cover only one item at a time. In listening to this lecturer, Field realized that he had been talking along the same lines for many years to his associates about the way scientists should talk to business men and the public, and he felt that scientists could take these four rules of good communication quite seriously.

Rules for Communication

1. **Use words the listener understands.**
2. **Use examples or analogies.**
3. **Keep listener psychologically receptive.**
4. **Cover only one item at a time.**

So far as using words the listener understands, Field felt that all too few scientists seriously seek examples or analogies in order to permit good communications between themselves and the public at large. He pointed out that a good analogy can serve the purpose even though not one-hundred per cent technically accurate. If the listener gets the general idea, the analogy is a success and its use in no sense can be considered as debasing science. The use of examples or analogies if properly handled can cover the first two points in the four rules

AIC President Work presenting the Honor Scroll to Dr. Field. Dr. Thomas, Pennsylvania Chapter Chairman is at right.

of good communication.

The problem of keeping the listener psychologically receptive is one that is relatively easy for the scientist to solve in these days, when as a result of rapid technological advances most scientific endeavors inherently have a glamor appeal to the business man and to the public, if the subject matter is properly presented. This is the case since practically every item of science in the present day can be intimately connected with some item important to the listener's daily life, such as his automobile, his new overcoat, his home, or the latest shade of lipstick.

As to the fourth rule of covering only one item at a time, Field advised interpreting this either literally or on the basis of what might be termed a "packaged deal." For example you can discuss the behavior of gasoline in an automobile engine as one item. However, since in the listener's mind that engine is intimately connected with his entire automobile, it is perfectly reasonable to trail that subject right through the automobile as far as fuel, motor oil, gear lubricant, etc. However, it would not be reasonable to talk about the automobile engine and the new overcoat in the same communication.

since there is little if any connection between these items.

Field recalled hearing David Lilienthal discuss, at the December ACS Chemical Show dinner, the technology of America's future in which comparisons were made of German, Russian, and American technology, and from which the conclusion was drawn that in many respects all three were or had been very good. This conclusion raised in Field's mind the question of where American technology could excel. He emphasized that we can make our American technology count, if we make it speak so clearly as to be understood by the most people. He urged that we all think of our work and talk of our work so that our non-technical neighbor will be sure to understand it and he emphasized that in this manner we will all be talking to our friends and to our bosses in a manner which will do us all the greatest good.

Presentation to Dr. Field

Dr. Hugh W. Field, vice president and general manager of The Atlantic Refining Company, Philadelphia, received the Honor Scroll of the Pennsylvania AIC Chapter, at a dinner meeting, December third, at the Penn Sheraton Hotel. A reception to Dr. Field preceded the dinner.

Dr. Walter W. Thomas, Chapter chairman, presided. Henderson Supplee, Jr., president of The Atlantic Refining Company, reviewed Dr. Field's career. Dr. Lincoln T. Work, AIC president, presented the scroll, which Dr. Field accepted with a message on the importance of communication. (See page 93.)

Dr. Field, born in Indianapolis, Ind., attended grammar school in Sydney, Australia. In 1928, he received the B.S. degree from the University of Pennsylvania, and in 1952, the honorary degree, Doctor of Engineering, from Drexel Institute of Technology. He started work, in 1928, with The Atlantic Refining Company as a junior engineer, and successively became assistant engineer, senior engineer, supervising engineer, assistant manager of the Research and Development Department, and general manager. In 1946, he was elected to the Board of Directors, and in 1929, he became vice president in charge of Research and Development. He served on Government committees during World War II, dealing with aviation gasoline, synthetic rubber, and toluene. His hobbies are photography, woodworking, weaving, and magic!

The citation to Dr. Field reads:

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Rewards for Chemists — Financial and Other

Morris T. Carpenter

Administrative Director of Research, Standard Oil Company (Indiana), 910 South Michigan Ave., Chicago 80, Illinois

(Presented at a recent meeting of the Chicago AIC Chapter.)

THE methods for determining suitable rewards for chemists, or anybody else, are largely in the crystal ball stage at the present time. A good many articles, pamphlets and books have been written about rewards for technically trained people and many speeches have been made on the subject. However, it may be worthwhile to summarize some of the recent thinking on this subject.

Proper rewards for chemists are probably little, if any, different from proper rewards for any other kind of people. If a job has been well done, the person who did the job wants recognition for his good work in one way or another. Probably for most people this means financial recognition, but there is much evidence to indicate that money is not the only thing that counts. Almost everybody wants to make enough money to permit a reasonable standard of living, but once having reached this level, the motivations for different people become different. Some want still more money; some prefer administrative responsibility with consequent recognition that they have moved up the ladder; still others would prefer to achieve professional recognition. The paths through which these different ambitions may be realized are quite different and it is important for an individual to decide the goal he wishes to strive for.

The young college graduate coming into industry probably doesn't know exactly what he intends to do ultimately. This is usually true of B.S. and M.S. people, and it is also true, perhaps to a lesser degree, for Ph.D.'s. In any event, the first few years of industrial employment will usually be spent trying to find the line of activity of most interest and trying to get a salary which would permit marriage and raising a family. Much can be done by industrial management to encourage professional development during these early working years for the new graduate. On the other hand, poor personnel policies can do much to discourage the young professional and sometimes make him wonder why he ever went to college. Good salary administration during the early years is one of the most critical items and is perhaps of equal importance to the work assignment. An engineer or a scientist

with college training properly resents it if he is assigned routine work that could be handled by a high school graduate. If, then, he is assigned work requiring his technical training, he soon feels that he should be paid more than non-technical help who may be reporting to him. If such salary is not forthcoming in a reasonable length of time, he is likely to get discouraged.

In practically all companies the starting salary of the technical man is higher than the starting wage of the non-technical man in order to reflect the potential value of college training. In my own company we have had in operation for over ten years a procedure whereby the salary of the technical man will be increased by specified amounts at regular intervals until his income is greater than the maximum paid to his hourly payroll helpers. Some of these latter may have taken years to have reached this top rate. Under our plan the man with a B.S. degree will pass the hourly roll man in a maximum of one and one-half years. M.S. men reach this level in a maximum of six months. These increases are given on schedule for men doing satisfactory work. If the quality of the individual's work does not justify these increases we feel that both the man and the company would be better off, if he left and found a job elsewhere more suited to his ability and personality. Ph.D.'s start at salaries above the top non-supervisory hourly roll rate and all progress is dependent on merit.

Patents as Rewards

A number of industrial organizations have attempted to use patents as a means of rewarding technically trained people. It is probably true that most people are interested in having patents taken out in their names. There is considerable prestige involved. Also, if you have a patent it is at least some indication that you may be one of these "creative" individuals. Aside from the possible financial benefit to the company, encouragement of patent activity is probably beneficial from the standpoint of morale of the technical staff. However research directors disagree as to the policy which should be followed in giving financial rewards for patents to personnel whose job is to do research and development work. Some people think that inventors should participate financially in some proportion to the financial benefit that the company derives from a patent. Others feel that the technically trained man is hired to invent, and if he comes up with a patentable idea, he is merely doing his job. Most research administrators are afraid that if the financial rewards for patents are too high an adverse effect on the organization may result. Some people work in areas where new ideas may be quite valuable to the company, but these ideas may not be patentable. If financial rewards for patents are high it may prove difficult to

keep competent men working in such fields as technical service or analytical work, where good ideas may pay off handsomely, but may not be patentable. Also, if patents are worth a lot of money to an individual, the spirit of team work within the research organization, with complete freedom of interchange of ideas and information, may be impaired. Some companies have adopted a compromise whereby the inventor receives a financial reward for invention assignment varying from $10 to $200, regardless of the financial benefit which the company may derive from the patent. The thought here is to stimulate invention and to encourage the inventor to cooperate with patent attorneys without running the risk of having engineers and scientists wanting to work only in fields where they can take out patents. Regardless of the extent of financial reward for inventions, it is probably a good idea to publicize, within the organization, the names of people who produce patentable ideas. The prestige of the individual is enhanced by such publicity and morale in general may be improved.

Merit Raises

I have the distinct impression that some people have acquired a wrong idea about merit raises. The word "merit" has a meaning quite different from the word "service." It is only reasonable to assume that a normally intelligent individual will gain experience as he works on his job. If he works there long enough he will undoubtedly be able to do certain things he could not do the day he came to work. But does he thereby acquire "merit"? It seems to me that "merit" implies that the individual has done something special — a little something extra. We must consider carefully what we mean when we talk about "merit raises." If we are talking about getting raises because we have been able to keep from getting fired for a year or two, that is one thing. If we are talking about being rewarded for something a bit special, for what the military services call "over and beyond the call of duty", that is something quite different. The question is whether we shall retain the procedure whereby people are awarded for above average work or whether we should adopt a system whereby everybody gets a few dollars every once in a while just because they are still on the payroll.

It must be obvious that any measure of "merit" is just a question of somebody's judgment. You may not agree with the conclusion, but even if it is you who is involved, you should recognize that if you are found to be

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without "merit" the fault may well be yours and not your boss's. You may think that your boss is wrong, but you have to remember that somebody has to run the place. Even you would form your own judgments. Some people you would consider capable and others you would have no use for. But when you make such judgments, please remember that somebody else might think differently. Technically trained people should consider very carefully whether they want to get on the basis of everybody getting certain specified financial advancements on schedule or whether they prefer to be treated as individuals. Any attempt to use both methods at the same time can only bring trouble. The trouble is that if you elect to be as an individual, you must accept the fact that somebody is going to judge you as an individual. The alternative is that your rate of progress will be determined ahead of time and what you do on your job will have little, if any, influence on your rate of progress. These are not simple problems and it would be easy to fall into a trap without realizing that the trap was there. In other words, "merit" and "service" mean two different things.

Recognition

After achieving a salary that permits a reasonable standard of living, recognition becomes increasingly important to a technical man, regardless of the kind of recognition he seeks ultimately. The problem is relatively simple for the individual who has adequate ability combined with administrative ability. The way is open for him to progress through the various levels of research management or he may move over to jobs that open in manufacturing, sales, or in other parts of the company that require a technical background. Progress of this type of individual will depend upon his abilities compared with those of his associates and the opening of suitable opportunities. Usually in a big company there are more openings than there are top flight men of this type to fill them, particularly if the company is growing. Thus management usually has little trouble in taking care of the competent technical man who is also capable of directing the activities of others.

A different problem entirely exists with an individual who may be a top-flight research man but who has little interest in, or ability, to direct the activities of others, except perhaps for a few helpers. In years gone by, the only way to reward a good scientist was to put him on an administrative job, even if he had little administrative ability, and hope for the best. The "best" usually turned out to be the "worst"; a good research man was ruined in order to create a poor administrator. Over the years, as research organizations grew in size and maturity, this problem became increasingly acute. Top-flight research men do not come down the pipe everyday and when one shows

up, every effort should be made to utilize his research abilities to the maximum extent possible, This is not only in the interest of the company, but the national interest demands that these rare individuals be given every possible incentive and opportunity to use their scientific talents. On the other hand, it hardly seems fair to assume that these individuals work and produce only because of their unusual love for their work. Most of them have ambitions along material lines which need to be satisfied if they are to work at maximum productivity. The contributions that these individuals can make to the future of the company may be considerably greater than the contributions of many men in the executive ranks. Therefore, it is not only unfair, but it is actually poor business to keep men of this type at relatively low salaries.

A number of companies have devised methods for coping with this problem. Most of these methods are similar in principle, although the details vary. In my own company we have created a number of technical positions paralleling administrative positions in the Research Department right up to the top. These technical positions have little, or no administrative responsibility although the incumbents are considered part of management. Salaries are paid to the corresponding administrative positions. In addition, considerable pains have been taken to have it known throughout the company that these positions rank in company thinking and policies right along with their administrative counterparts. Extreme care is exercised to appoint only top-flight people to these jobs. As a result of this policy an individual can continue to work on essential technical assignments throughout his entire working career and still have prestige in the organization and a salary commensurate with his contributions. A number of different titles are used to designate these positions; i.e. Technical assistant, technical associate, research associate, senior research associate, technical service coordinator, and research coordinator. This system has been in effect for some years and appears to be working quite well.

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Other Rewards

There are a number of other ways of rewarding technically trained men. These include participation in company perquisites, encouragement to publish scientific papers, attendance at company expense at national technical society meetings, etc. These are undoubtedly helpful but sometimes difficulty develops in determining who shall benefit by such things. A system involving classifications of high ranking technical positions, as well as supervisors, may be helpful in drawing lines determining who can expect what.

One more point: Some chemists and engineers, even some who have done relatively well, compare their salaries with the incomes of successful physicians and lawyers. It must be admitted that top flight physicians and lawyers have larger incomes than most high ranking scientists and engineers in industry, except for those in top executive positions. However, it does not seem fair to conclude from this that industry is shortchanging its technical men. In the first place, a chemist or an engineer can go into business for himself. Many have done so with notable success. The road is hard and the pitfalls are many; but years of training, internship, and early years of meagre income for the physician is no bed of roses either. In addition, the physician has essentially no security at any time in his career comparable with that available to most chemists and engineers in industry. Also, you might think of being called out of bed in the small hours of the morning without really knowing whether there is an emergency or whether Suzy has just sneezed again! It seems to me that chemists and engineers who want to enjoy relatively high salaries immediately after college and take advantage of the security offered by industry, should hardly expect to reap the rewards of another individual who has none of these things. The successful physician or lawyer has gambled considerable for his success. He was willing to pay the price of independence. It appears that many chemists and engineers are not willing to pay such a price, but still want the rewards that go with successful independence. The two don't go together and probably never will.

To sum up, it is the thinking of most people to whom I have talked that rewards for scientifically trained people must be different for different people if maximum efficiency and productivity in scientific fields is to be achieved. It is certainly true that adequate financial rewards are an impor-

tant factor. However, recognition in other ways is sometimes perhaps equally important. Research management must seek these methods of recognition and keep constantly in mind that most scientists and engineers want to be treated as individuals.

Comments and Questions During Discussion Period

1. Some members raised the question of comparing the chemist's society to that of the A.M.A. so that the number of chemists can be screened. The speaker said that good chemists tend to create more jobs for more chemists, therefore no definite number could be drawn.
2. The speaker was asked how merit raises could be differentiated between the distinct groups, such as the creative and routine worker. Mr. Carpenter thought that research management must apply judgment in either group and that merit raises should be given to both groups.
3. Mr. Carpenter's impression on the cost of living raises was that percentage increases are necessary to combat the cost of living.
4. Another question was directed to the speaker in regard to the introvert who is a good chemist but does not seek out work. Mr. Carpenter felt that the responsibility lies with the group leader in charge and it was up to him to draw out the individual.
5. What could be done about the great differences in the rate of the starting salaries and the rates of the older employee's salary? Mr. Carpenter's answer was that the rates of the starting salaries in relationship to the rates of the older employee's salaries has been increasing for the past few years due to the competition that has existed and that management is trying to close the gap. Despite this awareness on the part of management, the rate of increase for the older employee still lags behind a bit.
6. What about the employee who is technically trained and is put on routine work and left in that position? Mr. Carpenter said that routine work can and should be handled by the non-technically trained men. The number of non-technical men handling routine work is on the increase.
7. A question was asked on what pathway should the average chemist take to seek the best reward? A smaller organization or a large organization? Mr. Carpenter felt that a man would be able to go further with the larger organization. More opportunities.
8. One point was brought out about letting the public become aware of the chemists role in the same light as the lawyers and physicians. Larger companies have greater opportunity to help in letting the public know.

Discussion Reported by
ROSE MARIE BRUNETTI, M.A.I.C.

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Cited: Dr. J. B. Hester, F.A.I.C., of the Campbell Soup Company, Research Station, Riverton, N.J., by the Vegetable Growers Association of America, which presented him with a Certificate of Achievement at its annual meeting in St. Louis. He was recognized for his outstanding contribution to the vegetable industry in the field of soil fertility.

Opened: The new $15 million petrochemical plant of Sun Oil Company at Marcus Hook, Pa., designed to produce benzene, toluene, and xylenes.

International Detergent Congress: To be held August 30th to September 5th, at the Sorbonne, Paris, France. Professeur Trefouel, directeur de l'Institut Pasteur will preside. Sections planned are (1) Scientific, (2) Technical, (3) Applications, (4) Economic. For information, write Le Directeur, Chambre Syndicale TRAMAGRAS, 70 Champs-Elysees, Paris 8e, France.

Alpha Epsilon Delta, National premedical honor society, announces the installation of the Louisiana Beta Chapter at Louisiana State University, Baton Rouge, on January 16th, with the initiation of fifty-six students and members of the faculty. Dr. Joseph B. Price, national vice-president of Alpha Epsilon Delta, and Dr. Emmett B. Carmichael, F.A.I.C., former national president, were the installing officers.

Perkin Medal: Awarded to Dr. Roger Adams, Hon.AIC. at the January 16th meeting of the American Section of the Society of Chemical Industry, Waldorf-Astoria Hotel, New York, N. Y. Dr. Adams, head of the Department of Chemistry and Chemical Engineering, University of Illinois, was honored for outstanding contributions to many phases of industrial chemical development.

In his acceptance address, Dr. Adams urged closer friendship and cooperation between university professors and technical executives and industry. He classified chemists (and others) into three categories: (1) Those who are blessed with many original ideas but who are too impatient or are inept at developing them. (2) Those who are not clever at selecting or devising worthwhile problems but who excel in the implemetation of assignments; and (3) The small and very unusual group who have brilliant ideas and the ability to direct their development to a successful conclusion.

"A substantial proportion of the students who take Ph.D. degrees will never excel in research. It is unfortunate that the university does not teach the student something about the diverse operations of a successful chemical company."

Returned: From Europe, after a 15,000 mile flight, Rudolph Seiden, F.A.I.C., and Mrs. Seiden, to their home in Kansas City, Missouri. "It was wonderful seeing old friends and new cities after twenty years."

Elected: Dr. Thomas H. Vaughn, F.A.I.C., as vice president in charge of research and development of Colgate-Palmolive Company, Jersey City 2, N. J.

Appointed: Dr. Frederick M. Meigs as assistant general manager of Foreign Operations of General Aniline & Film Corporation, New York, N.Y.

Our First President

A Sketch by One of His Former Staff Members

DR. HORACE G. BYERS, member of the organizing committee and first president of THE AMERICAN INSTITUTE OF CHEMISTS lives a quiet life of retirement in his suburban home, Arlington, Virginia. He trims a few bushes or otherwise gardens each day. Chemistry is only by reminiscence.

Dr. Byers had a distinguished career as teacher and as leader in research. His earlier investigations of the passivity of metals and later his industrial research were well-known when Byers was president of the INSTITUTE. He properly considers his investigations of selenium in soils, plants, and other materials the crowning achievement of his career in chemistry. One of his former staff members sent to the AIC office a bibliography of 41-references covering the greater part of the research on selenium conducted by himself and associates over a period of approximately ten years.

The whole story of Byers and selenium in agriculture will probably never be known. Some important findings were reported verbally, particularly during early stages of the work. Why? Because he was a part of a Federal organization and the known presence of seleniferous vegetation on a farm might drastically influence the price of land. Such reports must, therefore, move through channels very slowly.

During the thirties, as since, scientific discoveries were frequently made by teams rather than by an individuall. The research of Byers on selenium must include his direction of the work of others who made important contributions in literature. Special mention should be made of certain associates. W. O. Robinson developed methods used for the determination of selenium in different materials found in quantities ranging from traces to large amounts. K. T. Williams supervised the analytical laboratory. John T. Miller led in the early field work followed by the detailed field investigations of soils and plants by H. W. Lakin. They studied the selenium problem throughout the United States, in parts of Canada and Mexico, and in meteors from outer space. This research program of Dr. Byers, covering nearly a decade, identified a chemical element responsible for animal sickness known in Western States as alkali disease. Proper utilization of the vegetation from seleniferous soils has been worked out.

It was found that certain kinds of plants, particularly of the astragalus group concentrate toxic quantities or organic forms of selenium when the quantity present in the soil may be less than one part per million. An-

other feature of importance is the tendency of selenium occurrence to follow certain geological formations, particularly of the Cretaceous Age.

The more important features of the investigations were published in seven technical bulletins, but many items were published in journal articles, particularly data covering selenium occurrence outside the United States.

It should not be assumed that selenium investigations occupied the whole attenion of Dr. Byers during his fourteen years with the U. S. Department of Agriculture. His investigations of the fundamental composition of soils in relation to their classification provided excellent information associated with the selenium problem.

Communications

Supplement to Letter

To the Editor:

Supplementing my letter (THE CHEMIST, January): At the 77th Annual Exhibition of the New York Microscopical Society, Feb. 6th, at the American Museum of Natural History, N.Y., the following living specimens by Dr. Eleanor Alexander-Jackson were shown:

(1) The motile form of the chicken cancer microorganism, cultured in an artificial medium from the Rous sarcoma "virus";

(2) The motile form of Hansen's bacillus (human leprosy) from a pure culture from a patient's blood.

Since all viruses are supposed to be "obligate parasites" which can grow only in living things (cells, tissues, etc.), the statement that a "virus" has been cultured in an artificial medium will be rejected out of hand by those having what has been called the "textbook mind." However, the shock can be lessened when it appears that the Rous "virus" is simply the ultramicroscopic or viral form of the larger Mycobacterium-like organism into which it can develop if given a suitable medium. For about 25 years the Rous "virus" has been accepted as the causative agent in this form of chicken cancer. Any one desiring to culture this or a quite similar organism from any other kind of cancer, can secure details from the Proceedings of the 6th International Congress for Microbiology (in press), or can write to Dr. Jackson. Possible antibiotics can be tested against cultures of the organism, and then on animals.

In *The Star,* Carville, La., Jan. 1954, after pointing out that the culture of Hansen's bacillus as described by her to the 6th International Congress of Leprosy, Oct. 7, 1953, opens the door to chemists and others to test out the value of drugs, etc., I stated: ". . . all those having at heart primarily the welfare of the community and the sufferers from Hansen's disease, should lose no time in look-

ing into her work, and putting themselves on official record by saying either that they have, or they have not, been able to repeat her oft-repeated results . . . Armchair denials and off-the-cuff fulminations are no reply to carefully conducted, often-repeated, and fully described experiments, the details of which are available to any interested scientist."

Anent the "virus": In his debate with Douglas, Abraham Lincoln posed the question: "If you call a dog's tail a leg, how many legs has a dog?" and when the audience shouted: "Five," Lincoln replied: "No: Only four. If you call a dog's tail a leg, that does not make it a leg."

—Dr. Jerome Alexander, Hon.AIC
New York, N.Y.

An Honor

To the Secretary:

I have always and shall always consider it an honor to be listed as a Fellow of The American Institute of Chemists.

—Wilmer C. Powick, F.A.I.C.
Chevy Chase 15, Maryland

Hard on Orchids?

To the Editor:

Is it not possible that Mr. Shuey, F.A.I.C. (Feb., 1954, p. 68) is a little hard on his orchids?

—John L. Hickson, F.A.I.C.
New York, N.Y.

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Appreciated

To the Editor:

I was quite impressed with Dr. Bender's presentation (December Chemist) of the many essential items relating to problems in the chemical profession. In this connection, I was also quite interested to read the discussion on "Mass Layoffs of Chemists," during the Oct. 29th meeting of the Chicago Chapter, but do we fully realize the effect of unemployment on men with education?

—M. R. Bhagwat, F.A.I.C.
Niagara Falls, N.Y.

Of Benefit

To the Editor:

The Chemist is certainly a very worthy professional publication, and it has been of real benefit to me.

—Dr. Garth L. Putnam, F.A.I.C.
Seattle 33, Washingon

Promoted: Fortuno De Angelis, M.A.I.C., to assistant to the director of market research of Foster D. Snell, Inc., 29 West 15th St., New York 11, N. Y.

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National Council Meetings

A meeting of the AIC National Council is scheduled to be held at The Chemists' Club, 52 East 41st St., New York, N. Y., at 6:00 p.m. on the following date:

Apr. 14, 1954

May 12, 1954 — Asbury Park

May 14, 1954 — Asbury Park

January Meeting

The 293rd meeting of the National Council of THE AMERICAN INSTITUTE OF CHEMISTS was held Jan. 13, 1954, at 6:30 p.m. at The Chemists' Club, 52 East 41st St., New York, N.Y. President L. T. Work presided.

The following officers and councilors were present: J. R. Bowman, M. L. Crossley, L. H. Flett, F. A. Hessel, M. J. Kelley, D B. Keyes, J. H. Nair, D. Price, F. D. Snell, R. Stevens, A. H. Warth, and L. T. Work. Others present were Max Bender, chairman of the Program Committee for the Annual Meeting; K. M. Herstein, chairman of the New York Chapter; R. W. Lamenzo, chairman of the Baltimore Chapter; P. L. Landolt,

chairman of a Committee on Public Relations; G. L. Royer, chairman of the Committee on Employer-Employee Relations; B. Sweedler, chairman of the Committee on Revision of the Constitution and By-laws, and V. F. Kimball.

President Work stated that Honorary AIC membership would be presented to Dr. Francis J. Curtis, F.A.I.C. at a meeting in the St. Louis area, with the cooperation of the Chicago Chaper. Dr. Robert L. Womer has been appointed chairman of the Committee on Arrangements for this meeting.

He announced that Mr. Landolt had been appointed chairman of a Committee on Public Relations to plan a program for the INSTITUTE. The following AIC members were asked to assist: Dr. Harry L. Fisher, Dr. B. S. Friedman, Dr. Lloyd A. Hall, Milton Harris, Dr. H. B. Hass, Dr. E. H. Northey, Raymond Stevens, and Roger Williams, Jr.

The secretary reported that we have 2540 members. He announced the deaths of the following Fellows: Dr. George K. Falk on Nov. 22, 1953; Leonard S. Levitt on Sept. 24, 1953, and George D. Martin, on Oct. 8, 1953. A minute of silence was observed in honor of these members.

In connection with a letter from the chairman of the Chicago Chapter, a Committee was appointed to study the situation in regard to Chapter Refunds. Its members: Dr. Hessel, Mr. Flett and Mr. Nair.

Mr. Nair reported as chairman of the Committee on Membership.

Mr. Sweedler, as chairman of the Committee on Constitutional Revision, reported that, after considering all recommendations received from the Chapters and Council, the latest revision differs from that submitted this Fall as follows: (1) It restores the class of Associate membership. (2) It includes a definition of Emeritus membership. (3) It omits from membership on committees specific reference to the President, who under Sec. 7 of Article V, is ex-officio a member of all committees. (4) It defines when the officers shall take office. (5) It changes the requirements for the number of ballots necessary for ratification of an amendment from two-thirds to three-fourths of the valid votes cast. These proposals to amend the Constitution will be submitted to the Fellows of the INSTITUTE thirty days before the Annual Meeting, and shall be voted upon at the Annual Meeting. If the proposed amendments are approved by a two-thirds vote of the Fellows present at the Annual Meeting they shall then be submitted to a mail vote of the Fellows for ratification.

Upon motion, a vote of thanks was given to Mr. Sweedler and his Committee for the completion of the arduous task of revising the Constitution.

Dr. Snell reported, for the Jury on Medal Award, that Dr. William J. Sparks, F.A.I.C., has been selected to receive the 1954 Gold Medal of the INSTITUTE. The citation reads: "To Dr. William J. Sparks, an eminent scientist who has striven unceasingly for the promotion of the science of chemistry and the professional advancement of the chemist." The medal will be presented at the conclusion of the Annual Meeting in May 1954.

Dr. Bender reported tentative plans for the program of the Annual Meeting. Dr. Work pointed out that at this Annual Meeting we are not holding concurrent sessions, nor having reviews of technical fields as part of the program. These departures from our usual custom are expected to overcome the frustration of trying to decide which session to attend and to give more time for professional discussions. Another innovation is a dramatized panel on the evening of the second day.

Dr. Royer announced that the Committee on Employer-Employee Relations is working, through a sub-committee, on contracts in addition to its other work; and that it is meeting in conference with the heads of industrial relations of several companies.

Dr. Keyes reported favorable progress in the matter of the scientific manpower problem and its relation to Public Law 51 covering the service of young men in the Military Forces.

Mr. Herstein announced that the New York Chapter has established its own *Newsletter*, the first issue of which was distributed in January. It is mailing a questionnaire to its members to determine if they are interested in subscribing to a joint program of health insurance, limited to Chapter members.

Dr. Work announced that Dr. Albert L. Elder had been appointed chairman of a Committee to cooperate with the Department of Agriculture. Other members

include Mr. Herstein and Dr. Emil Ott.

Mr. Sweedler reported that the Bill to permit certain self-employed professional people, not now covered by Social Security, to participate in a tax-free pension plan, was still in Committee.

The following new members were elected:

FELLOWS

Hunt, Louis Wood
Scientific Staff Assistant, R. & D. Naval Powder Factory, Indian Head, Maryland.

Marusi, Augustine R.
Chemical Engineer, The Borden Company, Chemical Division, 350 Madison Avenue, New York 17, New York.

Robinson, Richard Sewall
Consultant, Research Administration, Arthur D. Little, Inc., 30 Memorial Drive, Cambridge, Mass.

Rusoff, Irving
Head, Biochemistry Section, Central Labs., General Food Corp., 1125 Hudson Street, Hoboken, N.J.

Scott, Albert B.
Associate Director of Chemical Control, Merck & Company, Rahway, New Jersey.

Shapiro, Leonard
Senior Chemist, Chemical Division, Titanium Alloy Mfg., Division National Lead Co., Box C, Bridge Station, Niagara Falls, New York.

Skinner, Hervey Judson
Vice President & Treasurer, American Conditioning House, Inc., 11-17 Melcher St., Boston, Mass.

Weinberger, Harold
Head, Research Department, Fine Organics, Inc., 205 Main St., Lodi, N.J.

Weiss, Francis Joseph
Consultant, 2000—37th St., N.W. Washington 7, D.C.

MEMBERS

Collins, John Frederick
Personnel Associate, Armour Research Foundation, 10 W. 35th St., Chicago Illinois.

Foy, George F.
Assistant to Manager, Fine Chemical Division, Shulton Inc., Clifton, New Jersey.

ASSOCIATE

Macchiaverna, Mario
Assistant Supervisor of Laboratory, Head Biochemical Dept., Veterans Administration, 20 Washington Place, Newark, New Jersey.

REINSTATED TO FELLOW

Douglas, William Richard
65 University Place, Apt. 429, New York 27, N.Y.

Kamlet, Jonas
Director, The Kamlet Laboratory, 300 4th Avenue, New York 10, N.Y.

RAISED FROM MEMBER TO FELLOW

Konstandt, Felix V.
Director, Analytical & Eval. Section, Emmett Technical Associates, 92 Liberty Street, New York 6, N.Y.

Addresses Wanted

The names and last-known addresses of the following AIC members are listed here in the hope that someone may be able to supply their present addresses. Please send information to The Secretary, The American Institute of Chemists, Inc., 60 East 42nd St., New York 17, N. Y.

Albert I. Arnoff
1721 Commonwealth Ave.,
Brighton 35, Mass.

Mrs. Charlotte Jane Backer
635 W. Warren Ave., Apt. 11,
Detroit 1, Mich.

Lowell W. Bahe
1617 S. 55th St.,
W. Milwaukee, Wisconsin

Davis Monroe Batson
2211 Washington Ave.,
Silver Spring, Maryland

Mrs. Louis J. Bryon,
274 Sharpe Ave.,
Staten Island 2, N. Y.

Joseph S. Chamberlain
4212 Parkmond Ave.,
Baltimore 6, Maryland

P. N. Cheremisinoff
1482 W. Terrace Circle
W. Englewood, N. J.

Joseph Daniel Edwards, Jr.
P.O. Box 128,
Texas City, Texas

Americo L. Forchielli
2113 Hartford St.,
Salt Lake City, Utah

Ernst A. Hauser
77 Massachusetts Ave.,
Cambridge 37, Mass.

Rowena G. Hodge
University of Redlands,
Redland, Calif.

Edwin C. Howard
Hercules Powder Co.,
Klamath Falls, Oregon

Constantine Katsaros
8214 Ellis,
Chicago 19, Ill.

Ralph W. Kilb
Harvard University,
306A Richards Hall,
Cambridge 38, Mass.

John B. Lewis
Hanover Road,
Hanover, New Jersey

William Francis Martin
4910 Ft. Totten Drive, N.E.,
Apt. 22,
Washington, D.C.

Richard Miller
70 Chester Circle
Raritan Gds.,
New Brunswick, N. J.

Irving Reich
334 S. Westlake Ave.,
Los Angeles 5, Calif.

R. A. Rightmire
P.O. Box 82
Northfield, Ohio

Gary Lee Schott
University of Michigan,
Ann Arbor, Michigan

Joseph John Screnock
Harding Road 5,
Somerville, N. J.

Delores Sulzbach
2907 Guilford St.,
Philadelphia 15, Pa.

Edward D. Titus
255 Ave. A.,
Rochester 2, N. Y.

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16 East Lancaster Avenue
Ardmore, Pa. Tel. Midway 2-6457

Robert E. Townend
1921 N. Park Ave. ,
Philadelphia 22, Pa.

Anthony M. Trozzolo
Chicago Midway Labs.,
6220 S. Drexel Ave.,
Chicago, Ill.

Thomas N. Vincent
Princeton University,
Princeton, N. J.

Karl Vorres
Biochemistry Department
University of Southern California,
Los Angeles 7, Calif.

Sanford Weil
5514 S. Blackstone Ave.,
Chicago, Illinois

Awarded: To Loyola University, Los Angeles, Calif., a $2150 research grant from Research Corporation, New York. The research project will be conducted by Dr. Joseph Schwartz who will investigate the "nature of bonding in aliphatic C-nitroso compounds."

Reorganized: Sales and advertising policies of the Burgess-Manning Company, Libertyville, Ill., to coordinate with the trend toward industrial noise abatement. Merchandising Advertisers, Inc., Chicago 6, Ill. were appointed to execute the plans.

AIC Activities

C. P. Neidig, F.A.I.C.

New Jersey Chapter

Chairman, Dr. J. B. Allison
Chairman-elect, Dr. H. W. Mackinney
Treasurer, Dr. W. A. Raimond
Secretary, Dr. W. R. Sullivan, Hoffman-La Roche, Inc., Nutley 10, N.J.
Representative to National Council, P. J. Gaylor

March Meeting

The March meeting will be held Monday, March 29th, at the Military Park Hotel, Newark. Dr. Robert A. Winters will discuss the timely subject of "Economic Forecasting." Dinner ($2.90) will be served at 6:30 p.m. For reservations call Dr. J. B. Allison, Rutgers University, New Brunswick, N.J. (Charter 7-1766.)

Honor Scroll Award

The 1954 Honor Scroll of the New Jersey Chapter will be presented to Prof. Peter Van der Meulen, director of the School of Chemistry, Rutgers University, at the Chapter's annual meeting to be held on Tuesday, April 27, 1954, at the Military Park Hotel, Newark, N. J. Chapter Chairman J. B. Allison will make the presentation. Dr. D. L. Cottle, of Standard Oil Development Corporation, will discuss the recipient and his accomplishments. Professor Van der Meulen's address will be "A Chemist Looks at Educational, Industrial and Community Life." Student awards will be presented to outstanding seniors chosen from the Newark College of Engineering, Princeton, Rutgers, and Seton Hall Universities.

Dinner ($2.90) will be served at 6:30 p.m. and the meeting will begin at 8:00 p.m. For reservations call Dr. W. R. Sullivan, Hoffman-La Roche, Inc., Nutley 10, N. J. (Nutley 2-5000, extension 346.)

AIC on TV

The New Jersey AIC Chapter is preparing a television program to be broadcast as part of the "Know Your State" series, for presentation in Newark, N. J., on channel 13, Tuesday, May 18th, from 8:00 to 8:30 p.m.

New Jersey Chapter Honor Scroll

The Honor Scroll of the New Jersey Chapter of THE AMERICAN INSTITUTE OF CHEMISTS will be presented to Dr. P. A. Van der Meulen, director of the School of Chemistry of Rutgers University, at the Chapter's meeting to be held at the Military Park Hotel, Newark, New Jersey, on April 27, 1954.

New York Chapter

Chairman, Karl M. Herstein
Vice-Chairman, Savery F. Coneybear
Secretary-treasurer, Richard L. Moore, Foster D. Snell, Inc., 29 West 15th St., New York 11, N.Y.
Representative to National Council, Dr. M. J. Kelley

Students Receive Medals

Medals were awarded to seventeen outstanding chemistry and chemical engineering students from the colleges and universities in the New York city area, at the meeting of the New York Chapter held March fourth, at the Union Carbide and Carbon Cafeteria, New York, N.Y.

Dr. C. P. Rhoads, director of the Sloan-Kettering Insitute for Cancer Research, addressed the meeting on "Rational Cancer Chemotherapy." Cancer research in entering a significant new phase of "truly specific cancer chemotherapy," he said. Only recently, as a result of a long-range research program, have chemical agents been found that will harm cancer cells without attacking normal cells. As an example, he cited the recent development by Sloan-Kettering Institute of 6-mercaptopurine, a chemical effective in the treatment of leukemia. Dr. Rhoads, who is also scientific director of Memorial Center for Cancer and Allied Diseases, and professor of pathology at Cornell University Medical College, said that the greatest obstacles to the discovery of a chemical cure for cancer have been conquered.

Karl M. Herstein, chairman of the New York Chapter, presided over the meeting and presented the awards. The seventeen medal winners and their sponsoring professors were the guests of the Chapter at

—C & E N

Karl M. Herstein, N. Y. Chapter Chairman; Dr. Rhoads, speaker; Student Medalists Joan Nolli and Irwin Gruverman.

the dinner that preceded the annual Student Medal Award Meeting.

The medalists, their colleges, and their sponsoring professors were: Gerasimos Karabatsos, Adelphia College (Prof. A.M. Vogel); Seymour Siegel, Brooklyn College (Prof. E. M. Livingston); Leonard Schwartz, City College of New York (Prof. S. Soloway); Miss Susan Thumin, CCNY (Prof. A. X. Schmidt); Charles Brecher and Martin Friedlander, Columbia University (Prof. Arthur W. Thomas); Donald Olander, Columbia University (Prof. T. B. Drew); Irwin Gruverman, Cooper Union (Prof. H. Liebeskind); Richard Reade, Fordham University (Prof. W. F. O'Connor); Irwin Siegelman, New York University (Prof. H.G. Lindwall); George Harrington, New York University (Prof. G. M. Murphy); Irving Toplitsky, New York University (Prof. J. Happel); Norman Albert, Polytechnic Institute of Brooklyn (Prof. D. F. Othmer); Thomas Hakala, Polytechnic Institute of Brooklyn (Prof. P. F. Bruins); Miss Joan Nolli, Queens College (Prof. R. M. Whittaker); and Miss Susan Lowey, Barnard College (Prof. E. King).

In addition to the medals, the student winners were awarded Associate membership in the Institute for one year.

New York Chapter Honor Scroll

The Honor Scroll of the New York Chapter of THE AMERICAN INSTITUTE OF CHEMISTS will be presented to Dr. Hans T. Clarke, F.A.I.C., professor of biochemistry at Columbia University, at the Chapter's annual meeting in the Hotel Commodore, New York, N.Y., May 20, 1954.

Chicago Chapter

Chairman, Herbert F. Schwarz
Chairman-elect, Dr. Lloyd A. Hall
Vice-chairman, Clifford A. Hampel
Secretary, John Krc, Jr., Armour Research Foundation, Technology Center, Chicago 16, Illinois.
Treasurer, Albert S. Henick
Representative to National Council, Dr. Gustav Egloff

St. Louis Meeting

THE AMERICAN INSTITUTE OF CHEMISTS will honor Francis J. Curtis, vice president, Monsanto Chemical Company, with Honorary AIC Membership in recognition of his contributions to the chemistry profession, at a dinner meeting to be held in St. Louis, Missouri, March 23rd.

Members of the INSTITUTE and friends of Mr. Curtis are cordially invited.

March 23rd was selected for the particular convenience of those out-of-town persons who might be enroute to the American Chemical Society meetings in Kansas City and who would like to stop over in St. Louis for this occasion.

Please mail requests for reservation (dinner $6.50 includes all gratuities) to: Philip Tarr, Monsanto Chemical Co., 1700 S. Second St., St. Louis 4, Missouri. Place: Sheraton Hotel, St. Louis Missouri. Time: Tuesday, March 23rd. Cocktails 6:30 p.m. Dinner 7:30 p.m.

Moved: R. S. Aries & Associates, consulting engineers and economists, to 270 Park Ave., New York 17, New York.

Ohio Chapter

Chairman, Dr. Norbert A. Lange
Chairman-elect, Dr. David M. Gans
Secretary-Treasurer, Harold M. Olson, The Harshaw Chemical Company, 1945 East 97th St., Cleveland 6, Ohio
Representative to National Council, Dr. Malvern J. Hiler

April Meeting

The Ohio Chapter will hold an all-day meeting on April 9, 1954, in Louisville, Kentucky. A plant trip will be held during the day, the annual business meeting of the Chapter in the afternoon, and the Ohio Award will be presented, at a dinner meeting in the Brown Hotel, to Dr. James Scott Long, F.A.I.C., chemical director of Devoe & Raynolds Company.

The award is granted to Dr. Long in recognition of his achievements in chemistry which have brought distinction to the Ohio Chapter, which also embraces the States of Kentucky and Tennessee.

For information about this all-day meeting, to be characterized by true Southern hospitality, write Harold M. Olson, Chapter Secretary.

Will You Come

Mar. 4, 1954. New York Chapter. Cafeteria of Union Carbide & Carbon Corp., 30 E. 42nd St., New York, N. Y. Student Award Meeting. Dinner 6:00 p.m. $2.75. Social hour follows meeting. Speaker, Dr. Cornelius P. Rhoads, director of Sloan-Kettering Institute for Cancer Research. Subject, "Rational Cancer Chemotherapy."

Mar. 9, 1954. Washington Chapter. Luncheon. Bonat's Restaurant. Speaker: Paul A. Scherer, Executive Officer, Carnegie Institution, "The Government and Universities in Research."

Mar. 23, 1954. Chicago Chapter Meeting in St. Louis Missouri. Sheraton Hotel. Presentation of Honorary AIC Membership to Francis J. Curtis, vice-president, Monsanto Chemical Company. Dinner ($6.50) 7:30 p.m. Cocktails 6:30 p.m. Reservations: Philip Tarr, Monsanto Chemical Co., 1700 S. Second St., St. Louis 4, Missouri.

The Ohio Award

The 1954 Ohio Award will be presented by the Ohio AIC Chapter to Dr. James Scott Long, F.A.I.C., chemical director, Devoe & Raynolds Company, April 9, 1954, at its all-day meeting to be held at the Brown Hotel, Louisville, Kentucky.

Mar. 24, 1954. AIC Luncheon in connection with the 125th National Meeting of the American Chemical Society, Kansas City, Missouri. 12:15 p.m.

Mar. 29, 1954. New Jersey Chapter. Military Park Hotel, Newark, N. J. Speaker: Dr. Robert A. Winters, on "Economic Forecasting." Dinner ($2.90) at 6:30 p.m. Meeting 8:00 p.m. For reservations call Dr. J. B. Allison, Rutgers University, New Brunswick, N. J.

Mar. 30, 1954. AIC Luncheon in connection with the 125th National Meeting of the American Chemical Society, Kansas City, Mo., 12:15 p.m. AIC members who are attending the ACS meeting are cordially invited to include this and the March 24th luncheon in their schedules.

April 2, 1954. Chicago Chapter. Chicago Engineers' Club, 314 So. Federal St., Chicago, Ill. "Mixer" at 6:00 p.m. Dr. Charles C. Price, F.A.I.C., Head, Department of Chemistry, University of Notre Dame. Subject, "Science, Power and Freedom."

April 9, 1954. Ohio Chapter. Annual Meeting. Brown Hotel, Louisville, Kentucky. Plant Trip, Business Meeting, Presentation of Ohio Award to Dr. James Scott Long, F.A.I.C., Chemical Director, Devoe & Raynolds Co. For details of this full-day program: Harold M. Olson, The Harshaw Chemical Co., 1945 E. 97th St., Cleveland 6, Ohio.

April 27, 1954. New Jersey Chapter. Annual Meeting. Military Park Hotel, Newark, N. J. Presentation of the 1954 Honor Scroll to Prof. Peter Van der Meulen, director, School of Chemistry,

Rutgers University. Presentation by Dr. J. B. Allison. Dr. D. L. Cottle of Standard Oil Development Corp., will speak for the recipient. Prof. Van der Meulen's acceptance address will be "A Chemist Looks at Educational Industrial, and Community Life." Student Medals will be awarded to outstanding students from Newark College of Engineering, Princeton, Rutgers, and Seton Hall. Dinner ($2.90) at 6:30 p.m. For reservations, Dr. W. R. Sullivan, Hoffman-LaRoche, Inc., Nutley 10, N. J. (Nutley 2-5000, ext. 346.)

May 12, 13, 14, 1954. AIC Annual Meeting. Berkeley Carteret Hotel, Asbury Park, N. J. (See page 85.)

May 20, 1954. New York Chapter Annual Meeting. Presentation of the 1954 Honor Scroll to Dr. Hans T. Clarke, professor of biochemistry, Columbia University. Hotel Commodore, New York, N. Y.

May 12, 13, 14, 1955. AIC Annual Meeting. Chicago, Illinois. The Chicago Chapter has appointed Clifford A. Hampel to initiate arrangements.

May, 1956. AIC Annual Meeting. Tentatively scheduled for Washington, D.C.

Opportunities

Doris Eager, M.A.I.C.

AIC members who are seeking positions may place notices in this column without charge.

Positions Available

Analytical Chemists: B.S. to Ph.D. with or without experience. Personnel Office, Colgate-Palmolive Co., 105 Hudson St., Jersey City, N.J.

Chemists: Bachelor's or advanced degree for work in radiochemistry, gas research and nuclear emulsions—experience is desirable but not essential. Physicists: Bachelor's or advanced degree for work in instrumentation development and nuclear physics—experience is desirable. Electronic Engineers: Bachelor's or advanced degree for work in industrial instrument application engineering—experience in industrial process instrumentation desirable. Salary open depending on training and past experience. Write Industrial Relations Department, Tracerlab, Inc., 130 High Street, Boston, Mass.

Positions: U. S. Naval Ordnance, California:

Physicist, GS-11 or GS-12, directing research in thermodynamics, fluid dynamics, physical metallurgy, effects in solids produced by high dynamic loading, infra-red spectroradiometry, physical and geometrical optics, or solid state research.

Physicist GS-12 or GS-13, conduct research in field of exterior ballistics of rockets.

Metallurgist, GS-12, conduct metallurgical studies in field of warhead exploration.

Chemist, GS-11 or GS-12, conduct research in field of inorganic coordination compounds, their synthesis, and study of physical properties. Ph.D. or equivalent.

Chemist GS-11 or GS-12, conduct research in infrared absorption spectroscopy and study of structures of organic compounds. Ph.D. or equivalent.

Apply U. S. Naval Ordnance Test Station, Inyokern, China Lake, California.

Chemists Available

Chemist-Development Specialist: Desires to contact progressive organization needing project leadership in product or market development. Twenty-four years well-rounded experience in laboratory, pilot plant, and field at operational and administrative levels. Recent in aerosols, surfactants, insecticides, resins. Resume upon request. Box 30, THE CHEMIST.

Let this highly skilled paint chemist and chemical engineer (licensed) tackle your problems in trade sales paints and specialty items. Full or part time. Temporary assignments acceptable. Reasonable fees. Correspondence invited. Box 32, THE CHEMIST.

Consultant - representative: F.A.I.C. Available for exploration-contact-liaison work in Southern California on daily fee

or job basis. Highest references. 25 years laboratory, manufacturing executive, and sales experience. Box 34, THE CHEMIST.

Chemical Executive: Consultant. Age 33. Seeks challenging position to make full use of administrative ability, scientific and business knowledge in plastics, resins, pharmaceuticals, foods, etc. 14 years of progressively difficult experience. Past 9½ years, director of a chemical laboratory conducting research-development, product evaluation, quality control. Box 36, THE CHEMIST.

Research Executive: F.A.I.C. B.S. in Ch.E., Ph.D. Physical Chemistry. Fourteen years teaching and academic research; 11 years industrial type research and development involving administrative and technical supervision of large research division. Specialized in electrochemistry, corrosion, atomic energy, explosives, combustion. Patents, publications. Desires challenging position of responsibility in research administration. Box 38, THE CHEMIST.

Organic Chemist: F.A.I.C. Ph.D., 1949. Four years experience in organic synthesis, polymers, detergents, and application of physical methods. Publications and patents. Age 31. Married. Desire research or development position in industrial organization. Box 300, THE CHEMIST.

Research Director: F.A.I.C. Strong interests in physical and organic chemistry with considerable experience in synthetic work; 19 years of varied experience, the last 12 of which have strongly flavored with supervisory and administrative responsibilities. Desire challenging situation with progressive organization at supervisory level. Salary requirements: $15,000-$20,000 per year. Box 302, THE CHEMIST.

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Something New

"Executive's Manual," describes procedures of internal printing departments. Minnesota Mining and Manufacturing Co., 900 Fauquier St., St. Paul 6, Minn.

"Heavy Duty Laboratory & Industrial Stoves." Information. Waage Electric, Inc., Kenilworth, N.J.

"Cowles Ultra Fast Dissolvers." Equipment catalog. Cowles Co., Cayuga, N.Y.

"Precision Chemical Solution Feed Pump." Bulletin PM 20. Precision Machine Co., 8 Walnut St., Somerville 43, Mass.

"Fisher Kendall Mixer." Bulletin FS 238. Fisher Scientific Co., 717 Forbes St., Pittsburgh 19, Pa.

"Reilly Chemical Index." Brochure. Reilly Tar & Chemical Corp., 1615 Merchants Bank Bldg., Indianapolis 4, Indiana.

"Union Steam Generators & Allied Equipment. Catalog. Union Iron Works, Erie, Pa.

"Review of ASTM Research." American Society for Testing Materials, 1916 Race St., Philadelphia 3, Pa.

"Klem Catalog." Klem Chemicals, Inc., Dearborn, Mich.

"Berylco Product Directory." The Beryllium Corp., Reading, Pa.

"Mixing & Grinding Equipment." Bulletin 270. Stanley Craig, U.S. Stoneware Co., Akron 9, Ohio.

"Safe Handling & Use of Sulfur Dioxide." Data Sheet 52. Manufacturing Chemists Association, Inc., 246 Woodward Bldg., 15th & H Sts., N.W., Washington 5, D.C.

"Model 93 Bichrometer Infrared Analyzer & Model 105 Tri-Non Infrared Analyzer." Information. The Perkin-Elmer Corp., Norwalk, Conn.

SOMETHING NEW

"Scientific Research & Development Services." Truesdail Laboratories, Inc., 4101-4107 North Figueroa St., Los Angeles 65, Calif.

"Garden-Wise." Film. For Information, Merchandising Div., Monsanto Chemical Co., St. Louis 4, Mo.

"Pro-Gro Feed Supplement Concentrates." Technical Bulletin. Heyden Chemical Corp., 342 Madison Ave., New York 17, N.Y.

"Porcelain Valvrator Diaphragm Air Motor Valve." Catalog 70. Fischer & Porter Co., Hatboro, Pa.

"Crystal Gazing with X-rays." Reprint. Research & Control Div., North American Philips Co., Inc., 750 S. Fulton Ave., Mount Vernon, N.Y.

"Waukee Flo-meters." Bulletin 201. Waukee Engineering Co., 759 N. Milwaukee St., Milwaukee 2, Wisconsin.

"Howe Motor Truck Scales." Brochure. The Howe Scale Co., Rutland, Vermont.

"Labitems." Publication of The Emil Greiner Co., 20-26 North Moore St., New York 13, N.Y.

"Palo Junior Retort." Brochure. Palo Laboratory Supplies, Inc., 81 Reade St., New York 7, N.Y.

"Algaedyn." Information on controlling algae in water systems. The United States Movidyn Corp., 863 North Orleans St., Chicago 10, Ill.

"Tanks and Ducts of Iolyte." Information Schori Process Div., Ferro-Co Corp., 8-11—43rd Road, Long Island City 1, N.Y.

"GS-Mats." Information on corrugated rubber floor mats. General Scientific Eqiupment Co., 2700 W. Huntington St., Philadelphia 32, Pa.

"Cooperation of Industry, Government and Science in Community Problems." Mathew M. Braidech, F.A.I.C., Director of Research, National Board of Fire Underwriters, 85 John St., New York, N. Y.

"Elphco Electronic Relay, Model No. 3." Bulletin 26. Electro-Physics Co., 287 Broadway, New York 7, N. Y.

"Steno Creme," Information on waterless hand cleaner. Kelly Products Co., 813 W. Cedar St., Compton, Calif.

"List of Bristol Products." Bulletin W1805. The Bristol Co., Waterbury 20, Conn.

"Trioxane Alpha - Trixymethlene." Data sheet. Celanese Corp. of America, Chemical Div., 180 Madison Ave., New York 16, N.Y.

"Steel Shelving." Catalog. Precision Equipment Co., 3712 N. Milwaukee Ave., Chicago 41, Ill.

"Vermiculite News." Zonolite Co., Published by Harshe-Rotman, Inc., 8 S. Dearborn St., Chicago 3, Illinois.

"Sodium Dispersions." Bulletin. Ethyl Corp., 100 Park Ave., New York 17, N.Y.

"Where to Use Coal Tar Protection." Brochure. The Tapecoat Co., 1523 Lyons St., Evanston, Ill.

"High Vacuum Apparatus." Booklet. Central Scientific Co., 1700 Irving Park Road, Chicago 13, Ill.

"Ace Reefer King Pallet Roller." Information. Frank L. Robinson Co., Latham Square Bldg., Oakland 12, Calif.

"Catalog B." Arthur S. La Pine & Co., 6001 S. Knox Ave., Chicago 29, Ill.

"Hyfacs, 12 Hydroxystearic Acid Hydrogenated Castor Oil." Booklet. Emery Industries, Inc., Dept. 5, Carew Tower, Cincinnati 2, Ohio.

"Pharmaceutical Chemicals." Catalog. Fine Chemicals Sales Dept., Dow Chemical Co., Midland, Mich.

"Cyclic Type Molecular Still." Bulletin 2238. American Instrument Co., Silver Spring, Md.

"Propargyl Alcohol (2-Propyn-1-01)" Information. General Aniline & Film Corp., 435 Hudson St., New York 14, N.Y.

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For Your Library

Estimation of Organic Compounds

By F. Wild, New York, Cambridge University Press. 1953. 239 *pp.* 5¼" x 8½". $5.00

From the maze of chemical literature on the subject, Dr. Wild has gathered the best general methods for the quantitative analysis of the functional groups in organic compounds. All the important procedures are outlined in detail. Specialized methods used for amino acids, the sugars and the sulphonamides are omitted. This book may serve to stimulate interest in an often neglected phase of organic chemistry. It may be used as a laboratory manual by the advanced student or by the research worker.

—H. B. Wyckoff

The Vitamin B Complex

By F. A. Robinson. John Wiley & Sons, Inc. 688 *pp.* 5¾" x 8¾". $9.00.

Progress in the chemistry and biology of the vitamin B complex is rapid and extensive. Because of this a new monograph dealing with these vitamins is always welcome. This book discusses the isolation, synthesis; estimation; animal, human, and plant requirements; metabolism; analogues, etc. Every subject related to the B vitamins is admirably well-covered.

—Dr. Henry Tauber, F.A.I.C.

Physical Chemistry of Metals

By Lawrence S. Darken and Robert E. Gurry. McGraw-Hill Book Co., Inc. 535 *pp.* 6¼" x 9¼". $8.50.

Physical chemistry, with special attention to the solid state, metallic solutions and slags, phase relations from a thermodynamic viewpoint.

The Chemical Elements

By Helen Miles Davis. Science Service. 5⅓" x 8". 160 *pp.* $2.00.

A collection of the original descriptions of the discovery of the elements including the new transuranium elements, of a most interesting nature. Excellent tables and charts round out the presentation.

Handbook of Probability & Statistics with Tables

By R. S. Burington and D. C. May. Handbook Publishers, Inc. 340 *pp.* 5½" x 8". $4.50.

A comprehensive assemblage of statistical formulae and procedure with applications to samplings and quality control, interpolations and methods of presentation of the results of statistical analysis.

The statistician engages in a paradoxical endeavor to chain wild chance to probability and then to a form of order in the universe.

—Dr. John A. Steffens, F.A.I.C.

Inorganic Chromatography

By Orsino C. Smith. D. Van Nostrand Co., Inc. 1953. 134 *pp. Price* $5.00.

Superintendent of the Vinvale Refinery of the Richfield Oil Corporation, Mr. Smith is also the author of *Identification and Qualitative Chemical Analysis of Minerals,* and of *Mineral Identification Simplified.* While he was studying at the University of Missouri, he worked at the laboratory of the Dairy Department of the School of Agriculture and assisted in research being carried on there in the coloring of butterfat. He became acquainted with a method of chromatography invented by Dr. Michael Tswett, a lecturer on botany at the University of Warsaw. Years later, when this method had come into general use in organic resolution and preparation, he was convinced that chromatography should find a definite place in organic analysis. This review is the result

of his resolution to make the method of Tswett better known to those in this field. He has included as far as possible all pertinent literature and translated much of that available only in German.

Part I includes the history and theory of the Tswett method and a review of the researches of Schwat. Erlenmeyer and their co-workers, with chapters on column chromotography, paper chromotography, chromatography by ion exchange and radioactive tracers in chromotography. In Part II a systematic plan of inorganic analysis by chromatographic methods is given which includes the rare as well as the common metals.

This book is a must for chemists in the inorganic analytical field who will find here a thorough correlation of theory and practice and the way to use the speedy and most efficient scheme of inorganic analysis available.

—Dr. Frederick A. Hessel, F.A.I.C.

Chemical Books Abroad

Rudolph Seiden, F.A.I.C.

Verlag Chemie, Weinheim/Bergstr.: *Beitraege zur Geschichte der Naturwissenschaften und der Technik, Vol.* I, by E.O. von Lippman; 1953, 357 pp.; DM 21.80—The 72 articles and lectures by the noted sugar chemist Edmund O. von Lippmann (1857-1940) deal with a great variety of subjects and are a valuable contribution to the history of chemistry. Of special interest are the author's many discussions of chemical ideas and methods of ancient times and of the Middle Ages. This volume should be an inspiration to all those interested in the beginning of chemistry and chemical industry. Volume I of this work, published in 1923, is out of print.

Cleaver-Hume Press, London W1: *Physical Chemistry Made Plain,* by J.H. Mandleberg; 1952, 287 pp.; 15s.—With a minimum of mathematics, the author, not a teacher but an industrialist who calls himself "an incurable non-mathematician" explains simply, yet explicitly, the general theoretical principles of physical chemistry, brings (as his book's outstanding feature) an abundance of worked numerical examples, and adds questions (and answers) at the end of each chapter.

Verlag Birkhaeuser, Basel: *Die Entwicklungsgeschichte der Chemie,* by H. E. Fierz-David; 2nd ed., 429 pp. (112 ill.); Sfr. 24.95.—The only change which took place in the new edition of this survey of the development of chemistry from its earliest times to the present is the inclusion of a new chapter dealing with nuclear physics. The first edition of this work of Prof. Fierz-David, the well known dyestuff chemist, was reviewed in the February, 1950 issue of The Chemist.

Im Deutschen Verlag der Ullstein A.G.; Berlin-Tempelhof: *Chemie des Lebens,* by J. Flechtner; 1952, 413 pp. (170 ill., 8 tables); DM 16.50.—The chemical processes regulating life of plant, animal and man are discussed in a manner that can be understood by everyone. The author's style, the many excellent illustrations—mostly pen sketches by artists who possess a great sense of humor—the outstanding typography and good binding distinguish this book. It answers many questions concerning the chemistry of life, but it can not answer the age-old question: What is life?

Franckh'sche Verlagshandlung, Stuttgart-O: *Kosmos Lexikon,* Vol. I: A-Ky; 1953, 796 pp. (2320 ill.); DM 29.50.—To the first 3 parts of the new encyclopedia of natural sciences (announced in The Chemist January, 1953), 6 more parts have been added; the 9 parts are now available as Volume I of the work. It contains about 10,000 key words selected from physics, astronomy, botany, zoology, chemistry, medicine, biology, etc. When the (final) second volume becomes available, *Kosmos Lexikon* will be a very valuable encyclopedic reference book. • *Chemie-Lexikon, Vol. II*: L-Z by H. Roempp; 3rd ed., 1083 pp.; DM 96.—This is another reference work of international importance which has just been completed (see The Chemist, May, 1953). It contains a total of 15,000 terms defined in accordance with the latest findings of science and the most modern industrial production methods. The 2108-page chemical encyclopedia is indispensable not only for busy chemists and chemical engineers, but also for other scientists and anyone else who has to do with chemicals and chemical terms.

Akademie-Verlag, Berlin NW7: *Aktuelle Probleme der physikalischen Chemie,* by E. Thilo; 1953, 181 pp.; $4.18.—Important problems of physical chemistry, as outlined by 7 teachers of German Univer-

sities during a symposium, deal with such subjects as heavy water, (A. Eucken), virial coefficient (F. Sauter), transmission of energy and catalytic phenomena (K. Schaefer), affinity of protons and mesomerism (G. Briegleb), dissociation energy and electron affinity of F (E. Wicke), sintering (F. Sauerwald), and reactions with solid materials (K. Hauffe).

Bailliere, Tindall & Cox, London (Williams & Wilkins Co., Baltimore 2, Md.); *Aids to Analysis of Foods & Drugs,* by J. R. Nicholls; 7th ed., 516 pp.—A collection of selected methods which have proved themselves of practical value for the analysis of dairy products; starch foods; meat products; sugar and fruit products; tea, coffee, and cocoa; condiments and spices; alcoholic beverages; oils and fats; drugs; soaps; vitamins; preservatives; coloring matters; poisonous metals; etc.

Dastane Brothers' Home Service, Poona 2: *Selected Topics from Organic Chemistry,* by D. D. Karve and G. D. Advani; 3rd ed., 507 pp., Rs 12.—Summaries of 32 well-selected chapters of organic chemistry for (Indian) students preparing for their degree examination, with emphasis on synthetic procedures and structural formulas.

Urban & Schwarzerberg, Muenchen 22: *Ullmann Encyklopaedie der technischen Chemie, Vol.* III: *Abietinsaeure-Arsenverbindungen,* by W. Foerst; 3rd ed.; 851 pp., (206 ill.); DM 108.—Volume III (the second one available of the 14 volumes of the new "Ullmann") discusses thousands of chemicals and chemical terms—from abietic acid to arsenical compounds. In most cases, history, properties, occurrence, production, grades, analysis, uses, toxicology, derivatives, economical situation, and literature references are given. "Ullmann," written by the foremost German experts in their fields—scientists as well as industry leaders—is on its way to become again the most exhaustive, all-inclusive encyclopedia for chemists and engineers, as predicted in the review in the February, 1952, issue of THE CHEMIST. The complete "Ullmann" is badly missed by the many who in the past had used the previous editions of this most dependable reference work: they therefore hope that the next volumes will come off the press faster than the first two.

Annual Meeting Committees

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Chairman of Jersey Day Committee, Theodore R. Donlan, 626 Duquesne Terrace, Union, N. J.

New House Organ: *What's New in Food & Drug Research,* published by Food Research Laboratories, Inc., 48-14 33rd St., Long Island City 1, N.Y. Dr. Bernard L. Oser, F.A.I.C., vice president of the Laboratories and editor of the new bulletin, will send it on request.

Salaries of Engineering Graduates

New York University announces that its engineering graduates in 1953 started work at salaries averaging 5 per cent more than in 1952. Their average starting salary was $345 a month, with 71 per cent of the engineers taking jobs in private industry. The starting salaries ranged from $270 to $412.

In reporting the results of an employment survey of the 1953 class, Dean Thorndike Saville of the College of Engineering, stated that "Jobs were plentiful, and 46 per cent of the engineering graduates were hired on the campus." Nine per cent took civil service jobs. "Graduates are attracted to the civil service in appreciable numbers only in the field of civil engineering. In these cases, jobs are mainly on the state, county, and municipal levels, where starting salaries seem to have been adjusted to meet present-day scales. The Federal civil service has fallen far behind in this respect."

More students went into full-time graduate study: 15 per cent compared with 11 per cent in 1952. The highest average starting salaries ($355) went to graduates in mechanical engineering and engineering physics, though the fields with the highest starting salaries vary from year to year.

The Placement Bureau and the faculty of the College of engineering were instrumental in placing 63 per cent of the graduating engineers. Another 11 per cent found employment through direct inquiry and 11 per cent through family or friends. The remaining students obtained jobs through newspaper advertisements, private employment agencies, or professional societies or publications.

Plant Expansion: Announced by Arizona Chemical Company, a jointly owned subsidiary of American Cyanamid Co. and International Paper Co., to increase separating and refining facilities of the Panama City, Florida, plant by two and one-half times, largely to increase production of tall oil fatty acids and tall oil rosins.

New Asphalt Refinery: To be constructed at Hammond, Ind., to be known as the Allby Asphalt and Refining Corporation, according to a joint announcement of the Byerlyte Corporation, Cleveland Ohio, and Allied Materials Corporation, Oklahoma City, Okla.

Merged: Wallace and Tiernan Co. Inc., and Novadel-Agene Corp., into a single organization known as Wallace & Tiernan Incorporated, Belleville, N.J.

Appointed: To the Board of Trustees of Battelle Institute, Columbus, Ohio, Dr. Roger Adams, Hon. A.I.C., head of the Department of Chemistry and Chemical Engineering of the University of Illinois.

New Career Field

One of the least known career op portunities is in the field of commercial chemical development, C. W. Walton, former president, Commercial Chemical Development Association, stated recently. "No chemical company today is eager to enter a new field or introduce a new product until it is reasonably sure of a satisfactory profit. More and more, companies are being forced to turn to a highly organized system of evaluation, selection and initial 'controlled' market introduction, by specialists trained for this purpose. This system has become known as organized commercial chemical development."

A commercial chemical development specialist is involved with any and all programs or problems necessary to successfully exploit a new product from the technical research stage to sales, or to develop and expand new markets for existing products. "Usually the specialist acts in a coordinating or guiding capacity as a direct representative of top management." He described the field as "fascinating, challenging, and rewarding." Requiring a composite and well rounded technical and business background, commercial chemical development is one of the best management training grounds available today in the chemical and chemical process industries. Management has recently begun to organize long-range programs to develop the background of market research, product research and development, application research, technical service and chemical engineering needed for this field.

Science As Culture

The advocacy of science as culture as well as a specialty is not meant in any way to disparage the value of the various humanities . . . Science is not a thing apart but is as much one of the humanities as any other subject of human endeavor and, for the time being, it is one of the very dominant ones. Certainly we must agree that a man of culture must know something of the past, if only to understand the present and the other dominant features of our time, namely, the conflict of political ideologies. It is well to know literature and the arts. A man can know something about painting and books without being a painter or a writer, and so he can know something about science and not be a scientist . . . The culture of today is vastly conditioned by and influenced by science, and the modern man ignorant of science can no longer be considered the man of culture.

—Francis J. Curtis, F.A.I.C.
From Presidential Address,
Society of Chemical Industry

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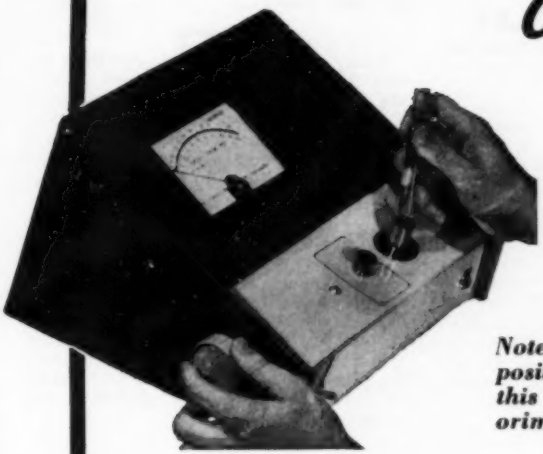

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Ed. F. Degering, F.A.I.C

The mounting surpluses of inedible natural fats may find an outlet in the production of animal feeds.

Expansion of the chemical industry during 1953 amounted to $1.6 billion, of which 20 per cent was for facilities for making new products.

Easter lilies may be lovelier this spring because polyethylene sheeting helped to give them better storage conditions this winter. Lily bulbs of many varieties are stored in plastic-lined cases with shredded-peat packing material moistened at about half of its total moisture capacity. The peat doesn't dry out, nor is it so wet that bulbs are in danger of rotting. Stronger lily plants, with more blooms, result.

Washington cherry trees were sprayed with naphthaleneacetic acid last spring to hold the blossoms until the Cherry Blossom Festival.

The first authentic pictures of an isolated poliomyelitis virus have been released by Parke-Davis Co.

Every chemical company, even those not now doing basic research, should contribute, according to Dr. Cary R. Wagner, F.A.I.C., president of the Synthetic Organic Chemical Manufacturers Association, a small amount to an industry-wide basic research program so as to eliminate duplication of effort.

To make a successful speech, according to Grove Patterson of the *Toledo Blade*, one should (1) say something in the first minute that will attract attention, (2) give every evidence of poise and humility, (3) indicate the number of points to be made (three to five), (4) maintain automatic, not planned, stage manners, and (5) make an emotional appeal to emphasize the points.

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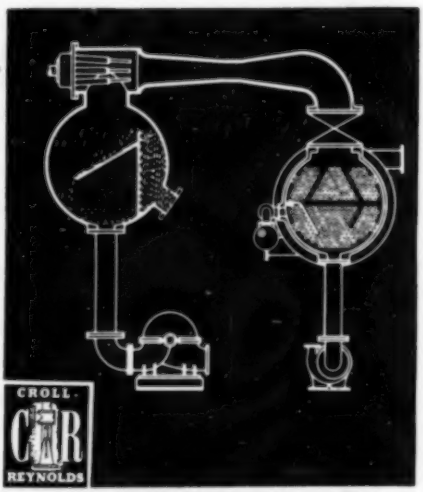

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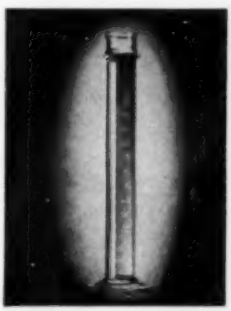

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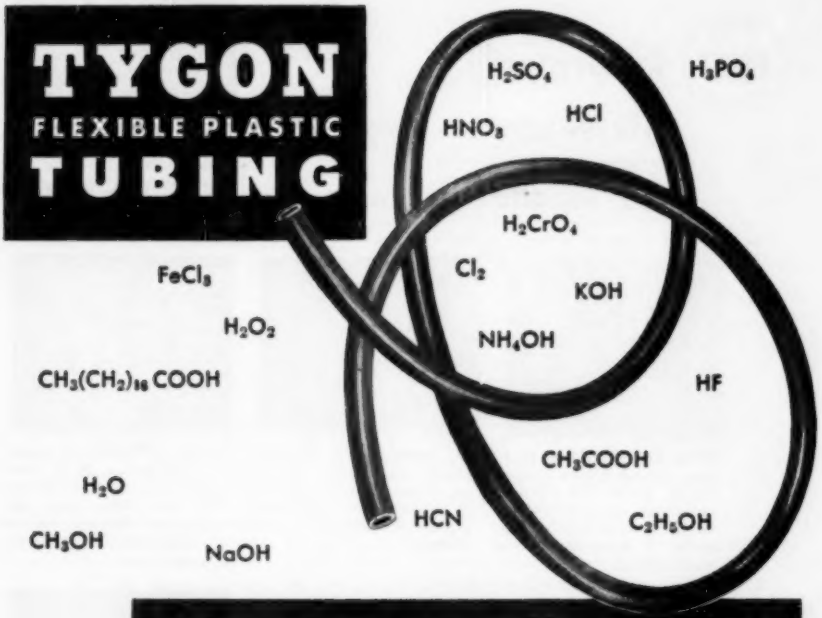

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